Complete Listing of the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (Original)   A method for pricing the current value of a basket option consisting of a plurality of underlying assets, comprising the steps of:

(1)   receiving an input indicative of the spot value for each of the plurality of underlying assets within the basket option;

(2)   receiving an input indicative of the risk free interest rate;

(3)   receiving an input indicative of the diffusion parameters for the option;

(4)   receiving an input indicative of the desired number of time slices;

(5)   receiving an input indicative of the maturity date of the option;

(6)   building a lattice, using said inputs from steps (1)-(5), wherein the lattice is comprised of an elementary cell structure for each of said time slices; and

(7)   traversing, in a backwards fashion, said lattice in order to calculate the value of the basket option from said maturity date to the present.

2. (Original)   The method of claim 1, wherein the plurality of assets includes exactly two assets and said elementary cell structure is a hexagon.

3. (Original)   The method of claim 1, wherein the plurality of assets includes exactly three assets and said elementary cell structure is a rhomba-dodecahedron.

4. (Original)   The method of claim 1, wherein the plurality of assets includes exactly n assets and the number of sides of the shape of said elementary cell structure is given by the equation: $(2n+1) - 2$.

5. (Original)   The method of claim 1, wherein step (1) comprises the steps of:

(a)   receiving an input indicative of the correlation, $\ddot{y}$, of each asset to each other asset within the plurality of underlying assets; and

(b)   receiving an input indicative of the volatility, $\ddot{y}$, of each of the plurality of underlying assets.

6. (Original)   A computer program product comprising a computer usable medium having control logic stored therein for causing a computer to price the current value of a basket option consisting of a plurality of underlying assets, said control logic comprising:

a first computer readable program code means for causing the computer to receive an input indicative of the spot value for each of the plurality of underlying assets within the basket option;

a second computer readable program code means for causing the computer to receive an input indicative of the risk free interest rate;

a third computer readable program code means for causing the computer to receive an input indicative of the diffusion parameters for the option;

a fourth computer readable program code means for causing the computer to receive an input indicative of the desired number of time slices;

a fifth computer readable program code means for causing the computer to receive an input indicative of the maturity date of the option;

a sixth computer readable program code means for causing the computer to build a lattice, using said inputs from said first, second, third, fourth, and fifth computer readable program code means, wherein the lattice is comprised of an elementary cell structure for each of said time slices; and

a seventh computer readable program code means for causing the computer to traverse, in a backwards fashion, said lattice in order to calculate the value of the basket option from said maturity date to the present.